



RAYSTAR

RAYSTAR Optronics, Inc.  
曜凌光電股份有限公司



# 曜凌光電股份有限公司 Raystar Optronics, Inc.

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## RC4004A1

### SPECIFICATION

#### General Specification

The Features is described as follow:

- Module dimension: 190.0 x 54.0 x 13.6 (max.) mm
- View area: 147.0 x 29.5 mm
- Active area: 140.45 x 23.16 mm
- Number of Characters: 40 Characters x 4 Lines
- Dot size: 0.50 x 0.55 mm
- Dot pitch: 0.57 x 0.62 mm
- Character size: 2.78 x 4.89 mm
- Character pitch: 3.53 x 6.09 mm
- Duty: 1/16
- View direction: 6 o'clock
- Backlight Type: LED
- IC: ST7066U
- Interface: 68 series

## Interface Pin Function

Pin No.	Symbol	Level	Description
1	DB7	H/L	Data bus line
2	DB6	H/L	Data bus line
3	DB5	H/L	Data bus line
4	DB4	H/L	Data bus line
5	DB3	H/L	Data bus line
6	DB2	H/L	Data bus line
7	DB1	H/L	Data bus line
8	DB0	H/L	Data bus line
9	E1	H,H→L	Chip enable signal
10	R/W	H/L	H: Read(Module→MPU) L: Write(MPU→Module)
11	RS	H/L	H: DATA, L: Instruction code
12	VO	(Variable)	Operating voltage for LCD
13	V <sub>SS</sub>	0V	Ground
14	V <sub>DD</sub>	5.0V	Supply Voltage for logic
15	E2	H,H→L	Chip enable signal
16	NC	—	NC
17	A	—	Power Supply for LED+
18	K	—	Power Supply for LED-



## Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	$T_{OP}$	-20	—	+70	°C
Storage Temperature	$T_{ST}$	-30	—	+80	°C
Input Voltage	$V_I$	$V_{SS}$	—	$V_{DD}$	V
Supply Voltage For Logic	$V_{DD}-V_{SS}$	-0.3	—	7	V
Supply Voltage For LCD	$V_{DD}-V_o$	-0.3	—	13	V

## Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For Logic	$V_{DD}-V_{SS}$	—	4.5	5.0	5.5	V
Supply Voltage For LCD	$V_{DD}-V_o$	$T_a=-20^{\circ}C$	—	—	5.7	V
*Note		$T_a=25^{\circ}C$	4.2	4.35	4.5	V
		$T_a=70^{\circ}C$	3.8	—	—	V
Input High Volt.	$V_{IH}$	—	$0.7 V_{DD}$	—	$V_{DD}$	V
Input Low Volt.	$V_{IL}$	—	$V_{SS}$	—	0.6	V
Output High Volt.	$V_{OH}$	—	3.9	—	$V_{DD}$	V
Output Low Volt.	$V_{OL}$	—	0	—	0.4	V
Supply Current	$I_{DD}$	$V_{DD}=5.0V$	1.8	3.5	7.0	mA